



**STATE OF MONTANA
MONTANA DEPARTMENT OF TRANSPORTATION
JOB PROFILE**



Update



Formal Review

Date Submitted _____

SECTION I - Identification

Working Title: Solid & Hazardous Waste Specialist

Department: Transportation

Job Code Number: 192417

Division & Bureau: Planning Division
Environmental Services Bureau

Job Code Title: Environmental Science Specialist

Section & Unit: Hazardous Waste Section

Pay Band: 7

Work Address: 2701 Prospect Avenue
Helena, MT

Position Number: 33008

Phone:



FLSA Exempt



FLSA Non-Exempt



Non-Union



MPEA



Blue Collar

Profile Completed By: Joe Radonich

Work Phone: 444-9204

Work Unit Mission Statement or Functional Description:

MDT's mission is to serve the public by providing a transportation system and services that emphasize quality, safety, cost effectiveness, economic vitality and sensitivity to the environment.

The principal goals of the Rail, Transit and Planning Division are to develop and implement a long-range multimodal construction program that addresses Montana's most important statewide transportation needs and to support the development and safety of Montana's multimodal transportation system. These dual goals are addressed through the complex interaction and interrelationship of the Data and Statistics, Planning & Policy Analysis, Highway Traffic Safety, Environmental, and Multimodal Planning Bureaus, as well as the Project Analysis Unit.

The Environmental Services Bureau's mission for MDT is to be the expert regarding all environmental issues, concerns and opportunities. Environmental Services provides leadership for the Department to ensure environmental excellence and compliance with all laws, rules, regulations, policies, orders and agreements. Impacts of transportation construction and maintenance activities on natural, social, and economic resources are identified and evaluated; and measures are recommended to avoid, minimize or mitigate such impacts in compliance with state, federal and tribal and regulations and policies. Resources evaluated by Environmental Services include those pertaining to fish, wildlife, vegetation, wetlands, water quality, historic, cultural, archaeological, paleontological, hazardous and solid waste, erosion control, air quality, noise, visual, social and economic.

The Environmental Services Bureau is comprised of the Hazardous Waste Section, the Engineering Section, and the Resources Section.

The Hazardous Waste Section functions within the Environmental Services Bureau as an integral part in the environmental process for the Department's project development, construction and maintenance activities in accordance with laws such as the National Environmental Policy Act (NEPA), the Montana Environmental Policy Act (MEPA), and applicable MDT and Federal Highway Administration (FHWA) standards and guidelines. The Section plays a unique role in the performance of complex actions impacting the Department's facilities and maintenance operations that are performed in accordance with state and federal hazardous waste laws, rules and regulations, such as the Resource, Recovery and Conservation Act (RCRA). The Section maintains a high level of knowledge, skills and abilities in applying these laws and rules to MDT's preconstruction, construction, maintenance and facilities operations. The Section achieves its goals by adopting an environmental protection management plan and implementing it throughout the entire Department. Activities are undertaken to clean up existing problems, identify unknown problems, and establish practices to minimize or eliminate problems in the future. The Section reviews proposed highway construction projects. Any environmental problems related to hazardous waste, leaking underground storage tanks, solid waste, air and water quality, and highway traffic noise are identified and, if possible, remediated before a construction project is let to bid. This Section is also responsible for compliance with the Clean Air Act Amendments, including analysis of potential impacts and conforming to Montana's State Implementation Plan to bring non-attainment areas into compliance

Describe the Job's Overall Purpose: This position serves as the Department's authority in solid and hazardous waste management, evaluation, analysis, remediation, and regulatory compliance related to all construction and maintenance projects as well as managing environmental compliance-related issues for MDT maintenance facilities. The position acts as liaison between regulatory agencies and various Department staff and involves highly complex and controversial environmental issues including solid and hazardous wastes, air quality, water quality, asbestos, leaking underground storage tanks, and traffic noise. The position is involved in all phases of project development. Each project is unique in scope and involves constantly changing environmental factors, regulations, and project designs that require the position to apply innovation and judgment to develop original approaches to resolving environmental concerns while ensuring the success of transportation projects. The position is responsible for developing, planning and implementing technical research, initial site assessments, intrusive site investigations, sampling and analytical plans, remediation of solid and hazardous waste, administering contracted services, providing technical assistance and training, and performing a variety of other complex and technical duties as described below. This position also provides oversight and management of the performance of contractors and consultants who perform a wide variety of tasks for the Department, including solid & hazardous waste remediation and cleanup, work plans, cost estimates, Source Water Protection Reports, traffic noise evaluations and modeling, groundwater quality testing and monitoring, and report preparation. The position reports to the Hazardous Waste Section Supervisor (#33013) and does not directly supervise other agency personnel.

SECTION II - Major Duties or Responsibilities

This section should be a clear concise statement of the position's major duties and the approximate percent of work time for each duty

% of Time

A. PRECONSTRUCTION ACTIVITIES

30%

1. Gathers environmental information for inclusion into Departments environmental documents for project development as required by the National Environmental Policy Act (NEPA). Analyzes and identifies the potential of encountering solid or hazardous waste, regulated or toxic materials, impacted surface or groundwater, underground storage tanks, or otherwise contaminated, polluted, regulated or impacted materials, soil, water or other features on or adjacent to proposed transportation projects. Reviews, analyzes, and interprets federal, state, and local records and reports (e.g. MDEQ registered and leaking tank files, abandoned mine records, the Emergency Response Notification System, State Superfund Information System, Comprehensive Environmental Response, Compensation, and Liability Information System, Resource Conservation and Recovery Information System, Toxics Release Inventory System, MT Groundwater Information Center records, aerial

photographs, R. L. Polk Directories, Sanborn fire insurance maps, as-built plans). Reviews and interprets applicable federal, state and local laws, rules, and regulations.

2. Reviews right-of-way plans, proposed construction plans, scopes of work, consultant reports, and milestone reports as project development proceeds. Evaluates project development with regard to possible impacts by hazardous and contaminated areas as well as potential impacts to air quality and from traffic noise. Provides written comments to all project plans and reports.
3. Analyzes and interprets all available data to determine the nature, scope, and magnitude of contamination and the extent of contaminant migration, whether or not remedial activity is necessary, and recommends appropriate remediation methods. This requires an assessment of the precise physical and chemical properties of the contaminants, the application of accepted scientific methodologies, the potential threats to human health or the environment, the need for on-site visits and field investigations; and the need for sampling of soils, water, or other materials and determining the parameters under which analysis should occur.
4. Conducts project-level conformity determinations on highway projects for transportation-related air pollutants. Seeks and negotiates concurrence from state, federal, and tribal agencies regarding project conformity. Prepares special provisions for contract documents to address mitigation measures for air quality impacts during construction.
5. Inspects facilities purchased by the Department (or those that are to be razed due to project requirements) for asbestos containing building materials by collecting samples for laboratory analysis. Prepares report to document the presence or absence of asbestos prior to sale or demolition of structures for real estate transactions, demolition contractors, and for permitting requirements for asbestos removal. Initiates contract procedures to perform asbestos abatement. Directs and oversees abatement contractors to ensure removal of asbestos prior to demolition or moving of structure(s). Inspects other structures such as bridges and buildings for the presence of lead based paints and other hazardous materials, collects appropriate samples for analysis, and prepares reports of findings as appropriate.
6. Performs assessments of properties being considered for purchase, exchange, or sale by Department. Coordinates with the Right-of-Way Bureau, obtains and evaluates acquisition or other documentation, performs site visits to assess the potential for past or current environmental concerns that may affect the property, and uses professional judgment to make recommendations to minimize Department liability. This may involve extensive negotiations between landowners, legal staff, and Right-of-Way personnel, translating technical concepts and data to individuals of varied technical backgrounds, and acting as a technical liaison for the preparation of Offers to Purchase and Exchange Agreements.
7. Reviews private developers and Department produced environmental checklists and supporting documentation relating to encroachments and systems impacts to Department right-of-way. Encroachments and system impacts consist of utility crossings, private and public approaches, oversize load permits, etc.
8. Conducts highway traffic noise assessments and impact analysis associated with proposed highway projects in accordance with federal regulations and Department policies. Highway traffic noise analysis involves gathering data in the field, conducting ambient noise level measurements and modeling present and design year noise impacts using sophisticated and complex computer noise modeling programs. A preliminary traffic noise assessment report is produced to guide designers in determining the best location of alternative alignments to reduce or eliminate noise impacts. Once a final design is chosen, a final noise analysis report is prepared that details specific impacts and provides options for abatement. Noise abatement decisions are made after detailed computer modeling, careful design and safety considerations and extensive public involvement. Directs and leads the noise abatement decision-making process in all phases of analysis, including public involvement and documentation of final process and outcome.
9. Writes and coordinates with preconstruction and construction project engineers to prepare project-specific contract special provisions, plans and bid items to ensure the successful mitigation of impacts to transportation projects. Prepares reports for the appropriate regulatory agency or agencies in

accordance with agency report guidelines that include details of the mitigation efforts and provides recommendations regarding any future activities.

B. MAINTENANCE AND FACILITY SERVICE FUNCTIONS

50%

1. Directs, oversees, and manages all activities associated with environmental site investigations conducted by agency employees and contractors, including the drilling of soil borings, removal of underground storage tanks, excavation of test pits, installation of monitoring wells, field screening of soil samples, collection of soil and groundwater samples for laboratory analysis, and preparing site maps. Plans and coordinates logistical arrangements and activities associated with environmental site investigations, including location of underground utilities, development and implementation of traffic control plans, notification of property owners, scheduling with drilling and excavation contractors and acquiring the appropriate supplies and materials.
2. Directs, manages and documents all activities associated with remediation projects, including excavation and disposal of contaminated soils as well as installation and implementation of *in situ* remediation and/or treatment systems. Manages all contracted employees and coordinates the work assignments with other Department personnel.
3. Oversees the work of consultants to ensure that work products meet professional engineering and Department standards, as well as standards and specifications dictated by state and federal environmental regulations. Develops, establishes and adjusts work plans, guidelines, and procedures consistent with the Department mission and Division objectives; environmental regulations and requirements; and changing needs of other work units and Montana's statewide transportation system. Monitors and evaluates project progress and proposes or approves necessary modifications, and participates in monitoring of project expenditures.
4. Facilitates the operation and maintenance of the Department's nine underground storage tank systems. Coordinates and schedules regulatory compliance inspections and assists with the repair and maintenance of the systems. Works cooperatively with Department Maintenance and Equipment personnel to troubleshoot system problems. Communicates routinely with regulatory personnel to maintain compliance with Department personnel training and system operation. Directs and oversees successful implementation of the federal Spill Prevention, Control, and Countermeasures (SPCC) requirements for numerous Department aboveground petroleum storage tanks. Conducts routine inspections and identifies compliance problems. Generates innovative approaches to maintaining compliance and initiates corrective actions. Performs routine training to provide consistent understanding of federal requirements.
5. Directs management of various solid and hazardous waste generation involving Department facility operations. Initiates the process for waste characterization and disposal options. Coordinates with appropriate personnel to ensure proper disposal of waste. Evaluates Department's waste generation processes and develops innovative alternatives to waste management. Coordinates implementation of alternatives and evaluates efficacy of new processes.
6. Assists with the operation and maintenance of various public water supplies located at Department rest areas. Oversees updates to Source Water Assessment and Delineation Reports and evaluates potential surrounding impacts. Troubleshoots contamination and well yield problems. Develops alternatives to correct water contamination and provide well rehabilitation oversight. Directs and oversees corrective actions. Provides training to the Department's public water supply operators to aid with maintaining compliance with systems.
7. Responds to spills and releases at Department facilities and along highway rights-of-way. Advises local MDT employees of spill response procedures, provides on-site assistance, collects samples for analysis, provides regulatory notification, arranges for proper disposal of contaminants, and prepares necessary documentation and technical reports for regulatory authorities. Manages investigation and remedial activities through regulatory case closure often providing regulatory cooperation oversight.
8. Develops and recommends Best Management Practices (BMPs) for control and management of chloride leachate from Department's sand/salt maintenance storage piles. Evaluates the potential for

chloride leachate to impact surrounding resources (e.g. groundwater, vegetation). Initiates corrective actions in cooperation with other Department units to mitigate potential contamination to resources. Develops and recommends BMPs for control of Total Maximum Daily Load (TMDL) of sediments in streams. This involves assessing and quantifying TMDL levels and standards for specific circumstances; evaluating and analyzing the impacts of bridges, sand, deicer, culverts, and other contributors on TMDL values; evaluating and minimizing the impact of highway-derived sediment on aquatic habitats; and developing defensible standards and innovative methods for managing TMDL while ensuring compliance with State and federal regulations

C. CONSTRUCTION OVERSIGHT

10%

1. Monitors project construction to assist the Contractor with adhering to contract requirements for handling and disposal of contamination and other hazardous or regulated wastes during construction activities. Acts as a liaison between Contractor and state regulators for construction activities in contaminated areas. Provides expert advice and guidance in the field and on the phone to Contractors and MDT engineering project managers during construction. Mobilizes to construction projects across the state on short notice to provide oversight and guidance for activities involving underground tanks, monitoring wells or hazardous wastes and materials.
2. Obtains and negotiates necessary permits from appropriate state, federal, tribal, or local agencies for handling and disposal of solid/hazardous waste, contaminated water, and/or underground storage tanks during project construction or mitigation efforts. Writes and reviews agreements between MDT and local agencies/authorities or companies for treatment of and payment for contaminated material during construction.
3. Directs and oversees private consultants and/or contractors in developing site-specific remediation plans on construction project. Reviews and evaluates project proposals, work plans, cost estimates and reports prepared on behalf of the Department, and conducts similar work in-house without the assistance of outside consultants. Submits plans and design specifications to appropriate regulatory agencies for review and approval. This involves detailing the proposed remedial activities, providing justification for the selected method, summarizing results and analysis of pilot tests, and preparing estimates of remediation effectiveness, costs and projected duration. Requires extensive knowledge of remediation systems, organic chemistry, contaminant transport and hydrogeology. Incumbent regularly reviews new remediation methods and treatment systems to stay current with advances in the field.

D. OTHER DUTIES

10%

1. Performs a variety of other duties as assigned by supervisors in support of Bureau goals and Division objectives. This includes maintaining contemporary knowledge of changing environmental practices, standards, and regulations; attending and providing training and professional conferences; coordinating special evaluation and research projects; developing and revising procedures for this Section's activities to ensure consistent, high quality performance of those activities by present and future MDT employees and consultants; management of the Montana Petroleum Release Compensation program for reimbursement of eligible costs of investigation and remediation; and performing a variety of other duties as assigned.
2. Conducts advanced professional research to develop and recommend new methods, standards, and procedures in response to continuously evolving State and federal environmental policies and standards, scientific discoveries, new technologies, and other developments. Initiates and conducts specialized research projects related to solid/hazardous waste, groundwater and surface water quality, transportation-related air quality issues, and noise analysis to continually develop solutions to avoid or minimize impacts of these environmental issues associated with project development and construction.
3. Develops and implements solutions to a broad range of complex and often unprecedented environmental analysis and mitigation issues. This includes both innovative approaches to site

evaluations (i.e., accommodating site-specific features and limitations while ensuring the scientific integrity of analyses and conclusions, etc.) as well as remediation methods that address unique circumstances. The incumbent may develop, recommend, and/or apply theoretical models for evaluation and remediation, developmental technologies, and new principles and standards to various situations.

1. ***The following duties and/or specific tasks listed under section II above are considered “essential functions” because they require specialized expertise and skill and are the primary reasons the job exists (they must be performed by this position with or without accommodations):***

- Develops viable and defensible recommendations to meet applicable federal and state environmental laws, rules, and regulations.
- Identifies potential regulatory non-compliance issues and proactively initiates corrective actions to avoid regulatory enforcement.
- Coordinates with regulatory agencies to negotiate actions beneficial to the Department.
- Recommends, oversees, and conducts hazardous waste mitigation measures and activities.
- Manages multiple projects under inflexible deadlines.
- Maintains positive working relationships with agency staff, consultants, contractors, other governmental officials, and members of the public.
- Adapts and modifies project plans according to changing site-specific characteristics.
- Applies judgment and analysis in arriving at solutions to a wide range of routine, unusual, or unprecedented problems.
- Directs and motivates consultants to meet common objectives.

The following mental and physical demands are associated with these essential functions:

PHYSICAL

- May have the potential to be exposed to or contact with hazardous materials and/or hazardous wastes.
- May work in proximity with heavy equipment including core drills, front end loaders, back hoes, cranes, dump trucks, and other earth moving equipment.
- Lifting (less than 50 lbs.)
- Travel within the state to project locations, and out of state travel by airline to national conferences and meetings.
- Operating a personal computer
- Communicate in writing, in person, and over the phone
- This position may need to be fitted for respiratory protection

MENTAL

- Ability to deal with changing priorities, technology, policy, regulation and due dates.
- Deal with the public, consultants and State and federal agencies on a regular basis
- Ability to multi-task
- Demands for accuracy in all aspects of work
- Decision making that affects public health and safety
- Comparing data
- Compiling information
- Analyzing
- Coordinating

- Synthesizing
- Negotiating

2. **Does this position supervise others?** ☐ Yes ☒ No

Number directly supervised: None
Position Number(s) of those supervised:

3. **Attach an Organizational Chart.**

SECTION III - Minimum Qualifications - List minimum requirements for the first day of work.

Critical knowledge and skills required for this position:

KNOWLEDGE:

This position requires extensive, interdisciplinary knowledge of the concepts, theories, and developmental applications of hazardous waste, resource, and pollution management; environmental, organic and inorganic chemistry; soil science; hydrogeology; environmental law; scientific research methods and techniques; and transportation project development. The position also requires knowledge environmental site investigation procedures and environmental sampling; underground storage tank technology and regulations; environmental laboratory analytical methods; procedures and reporting protocols; underground storage tank (UST) systems and aboveground storage tank (ASTs) compliance regulations; soil and groundwater treatment technologies; hazardous materials detection and identification; transportation management; and the use of environmental sampling, monitoring, and detection equipment.

SKILLS:

This position requires skill in using personal computers and a variety of software applications for preparing technical reports, tables, graphs and maps; specialized testing and analytical equipment; communicating technical complex, abstract, controversial, and emotional information and decisions to a variety of audiences, negotiating with designers, contractors, and consultants, working collaboratively with agency staff and outside consultants, and balancing engineering and project goals and demands with regulatory requirements; searching state and federal databases on the Internet; and designing and using computer models to extrapolate potential future impacts.

Behaviors required to perform these duties:

See MDT Core Behaviors

Education:

Check the one box indicating minimum education requirements for this position for a new employee the first day of work:

- | | |
|---|--|
| <input type="checkbox"/> No education required | <input type="checkbox"/> Related AAS/2-years college/vocational training |
| <input type="checkbox"/> High school diploma or equivalent | <input checked="" type="checkbox"/> Related Bachelor's Degree |
| <input type="checkbox"/> 1-year related college/voc. training | <input type="checkbox"/> Related Master's degree |

Please specify the acceptable fields of study:

This position requires a bachelor's degree in physical or natural sciences, engineering, or related field.

Other education, training, certification, or licensing required (specify):

- 40-hour OSHA 1920.120 – Hazardous Waste Operations and Emergency Response and 8-hour annual update courses required to maintain certification.
- 24-hour Asbestos Inspector Training and 8-hour annual update course.

Experience:

Check the one box indicating minimum work-related experience requirements for this position for a new employee the first day of work:

- | | |
|---|---|
| <input type="checkbox"/> No prior experience required | <input type="checkbox"/> 3 years |
| <input type="checkbox"/> 1 year | <input checked="" type="checkbox"/> 4 years |
| <input type="checkbox"/> 2 years | <input type="checkbox"/> 5 or more years |

Other specific experience (optional):

This position requires four (4) years of progressively responsible experience in environmental impact assessment, hydrogeology, environmental engineering, solid and hazardous waste, water quality, underground storage tank programs, soil and groundwater remediation, reclamation, or related field.

Alternative Qualifications:

This agency will accept alternative methods of obtaining necessary qualifications.

☒ Yes ☐ No

Alternative qualifications include:

A Master's degree in physical or natural sciences, engineering, or related field may be substituted for two years of required work experience.

SECTION IV – Other Important Job Information

- | | |
|--|--|
| <input type="checkbox"/> Fingerprint check | <input checked="" type="checkbox"/> Valid driver's license |
| <input type="checkbox"/> Background check | <input type="checkbox"/> Other; Describe |

Other information including working conditions such as shifts, lifting requirements, travel or hours.

This position requires travel throughout the state typically in excess of 12,000 miles per year to conduct project reviews, inspections, and site evaluations; attend public/project meetings; and meet with government officials. This position requires periodic over-night stays away from Helena. Enforcement activities and investigations may lead to confrontational situations. The incumbent may be working in adverse weather conditions on all types of terrain, and must be capable of lifting and transporting supplies and equipment. Duties are often performed on active construction sites in proximity to heavy equipment, hot asphalt, and high speed traffic, requiring use of hard

hats and safety training. Additional hazards consist of exposure to asbestos containing materials requiring the incumbent to don respiratory protection. Extended working hours and unusual shifts are required to meet project deadlines.

Driver's Records Check: Compliance with Mont. Admin. R. 2.6.201, "State Vehicle Use," and MDT Policy # 3-0134, "Addendum to Risk Management and Tort Defense Division State Vehicle Use Policy" are a condition of employment. Successful applicants will be required to sign a release form which authorizes the Department to obtain the applicant's permanent driving records.

SECTION V – Signatures

Signature indicates this statement is accurate and complete.

Employee:

Name: _____ Title: _____

Signature: _____ Date: _____

Immediate Supervisor:

Name: _____ Title: _____

Signature: _____ Date: _____

Bureau Chief:

Name: _____ Title: _____

Signature: _____ Date: _____

Division/District Administrator:

Name: _____ Title: _____

Signature: _____ Date: _____

Department Designee:

Brent Rabe/Designee

Human Resources Administrator
Human Resources Division

Signature: _____ Date: _____